

News and Features

Viagra makes flowers stand up straight

Judy Siegel-Itzkovich, Jerusalem

Viagra (sildenafil citrate) is good not only for treating male erectile dysfunction. Israeli and Australian researchers have discovered that small concentrations of the drug dissolved in a vase of water can also double the shelf life of cut flowers, making them stand up straight for as long as a week beyond their natural life span.

They have already tested Viagra on strawberries, legumes, roses, carnations, broccoli, and other perishables. In this latest research, they found that 1 mg of the drug (compared with 50 mg in one pill taken by men with erectile dysfunction) in a solution was enough to prevent two vases of cut flowers from wilting for as much as a week longer than might be expected.

Professor Yaacov Leshem, a plant researcher at Bar-Ilan University in Ramat Gan, Israel, and Professor Ron Wills of the food technology department of the University of Newcastle, Australia, also patented a safe, cheap process for increasing the shelf life of fruit, vegetables, and cut flowers using nitric oxide. The produce and cut flowers were fumigated with the colorless, odorless gas, an environmental pollutant that, in minute

quantities, acts as the body's most important signalling molecule.

The results of the applied research on nitric oxide were first fully reported in late 1998 in *Plant Physiology and Biochemistry* (1998; 36:825-833) and have since been the topic of discussion at international conferences of the food storage and packaging industry. Professor Leshem presented his discovery at the international conference on fresh cut produce in England last September.

An unexpected finding of Professor Leshem's group is that Viagra has a similar effect on plant ripening as it does on men's sexual organs. Viagra increases the vase life of flowers by retarding the breakdown of cyclic guanosine monophosphate (cGMP) (the production of which is mediated by nitric oxide).

Both chemicals could provide the food industry with entirely new, dramatically improved processes for preserving agricultural produce, Professor Leshem said. "Nitric oxide is practically free and plentiful, with no identifiable side effects at the very low concentrations we used," he added. "Right now, Viagra costs much more but does have cer-



Kevin Summers/Tony Stone Images

In need of some Viagra?

tain advantages over nitric oxide; for example, it's easier to use in cut flowers. It is now up to industry to develop the engineering methods for large scale, pretreatment of produce based on our discoveries."

Pediatricians propose plan to insure every American child

Scott Gottlieb, New York

The American Academy of Pediatrics announced a new health insurance proposal that would create a national program in which all children and young people up to the age of 21 are automatically eligible for full, government-funded healthcare coverage. At present, 11 million children are not covered by insurance.

The new program would have uniform

eligibility and benefits, and if enacted, would replace parts of existing programs that provide partial but not complete health insurance coverage, mostly to children born into poor families. The announcement was made at the academy's annual meeting held at the Washington Convention Center in Washington, DC—an event President Clinton attended and at which he offered his own ver-

sion of health insurance for children during a keynote address.

Under the president's proposal, federal agencies would be directed to visit schools and proactively enroll children into existing federal health insurance programs that the president said are largely underused. Congress created a new program that expanded health insurance to children in



Damien Dovarganes/AP

At least 11 million children are not covered by insurance

1997. It provided \$24 billion over 5 years and a total of \$39 billion over 10 years, but states have used less than 25% of the money made available so far. "It's simply

inexcusable that we've been sitting here with the money for 2 years to provide health insurance to 5 million kids, and 80% of them are still uninsured," President

Clinton said during his address to the academy.

The academy's proposal, however, goes further than the president's, and would seek to insure greater numbers of children. Under the academy's proposal, either families could choose to enroll their children in a private insurance plan or they would automatically be enrolled in a national program. This program would require an increased investment in children's health, and the academy said that it was still looking at a variety of ways to fund the proposal. Census Bureau data show that the number of children without health insurance has increased by 15.6% since President Clinton took office, to 11.1 million last year from 9.6 million in 1993. The number of uninsured children rose by 330,000 in 1998 alone, despite an exceptionally robust economy and billions of dollars of new federal money made available to pay for children's health insurance. "The world's most powerful democracy has 11 million uninsured children," said the academy's president, Dr Joel Alpert, in an address he delivered at the annual meeting. "There is no excuse for it. We can solve this problem," he said.

Study leads to a call for an end to spanking

David Spurgeon, Quebec

A Canadian study has shown that adults who reported being slapped or spanked as children were twice as likely as those who did not to have current problems of alcohol or drug misuse and to show antisocial behavior. The study, in the *Canadian Medical Association Journal* (1999;161:805-809), examined 4888 subjects, ranging in age from 15 to 64 years, none of whom reported a childhood history of sexual abuse or physical abuse, apart from spanking.

Measures included a self-administered questionnaire with a question about frequency of slapping and spanking during

childhood, as well as an interviewer-administered questionnaire to measure psychiatric disorder.

The frequency of slapping or spanking varied from "never" (20%) and "rarely" (41%) to "sometimes" (33%) and "often" (6%). Those from the last two groups had significantly higher lifetime rates of anxiety disorders. There was also an association with major depression, but it was not significant.

Linear trend analyses showed significant association between increasing frequency of reported slapping or spanking and increasing rates of lifetime psychiatric disorder. In an

accompanying editorial, Murray Strauss of the Family Research Laboratory, University of New Hampshire, wrote: "Ending spanking is a mode of primary prevention to which doctors can make an important contribution." He continued: "This will not be easy, because most doctors, like most patients, believe that spanking is sometimes necessary."

In Canada and the United States, corporal punishment of children by their parents is exempt from prosecution under the criminal code. Dr Strauss says that the current study adds to mounting evidence "that the time has come to end that exception."